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PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of	Docket No: Q65824
Hironori MIZUGUCHI	
Appln. No.: 09/924,723	Group Art Unit: 2631
Confirmation No.: 3958	Examiner: Shaima Q. AMINZAY
Filed: August 9, 2001	

For: TRANSMISSION POWER CONTROL SYSTEM AND METHOD CAPABLE OF SAVING BATTERY CONSUMPTION OF MOBILE STATION AND PREVENTING CONNECTION CAPACITY FROM BEING REDUCED

CORRECTED SECTIONS FOR APPEAL BRIEF UNDER 37 C.F.R. § 41.37

MAIL STOP APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In accordance with the provisions of 37 C.F.R. § 41.37, and in response to the Notification of Non-Compliant Appeal Brief dated April 5, 2006, Appellant submits the following corrected sections:

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V. SUMMARY OF THE CLAIMED SUBJECT MATTER

This invention relates to a transmission power control system and method for use in a digital mobile communication system, in particular to a reverse-link transmission power control system of the digital mobile communication system to control reverse-link transmission power. Specification, page 1, lines 6-9.

The independent claim limitations are disclosed in the specification and drawings in at least the following places. In additional, further background on the claimed invention is provided thereafter.

1. A base station (item 10, figure 4) of a mobile communication system (figure 4) comprising:

a communication monitor circuit (item 41, figure 4) for detecting quality deterioration of radio communication with mobile stations (item 20-1, 20-n, 20-N, figure 4), wherein:

said communication monitor circuit comprises:

a monitor unit for monitoring a communication state of said radio communication (page 4:21-23, page 14:13-17);

a judging unit coupled to said monitor unit for judging whether said communication state monitored by said monitor unit is worse than a predetermined state (page 4:23-25, page 13:21-25); and

a notifying unit coupled to said judging unit for notifying an external circuit of said quality deterioration when said judging unit judges that said communication state is worse than said predetermined state (page 4:25 to page 5:1, page 14:2-6).

6. A base station (item 10, figure 10) of a mobile communication system (figure 10) comprising:

receivers (item 11-1, 11-N, figure 10) for demodulating transmission signals transmitted from mobile stations to produce demodulated signals (page 10:9-12)

signal-to-noise ratio determining circuits (item 13-1, 13-N, figure 10) coupled to said receivers, respectively, for determining signal-to-noise ratios of said demodulated signals (page 10:20-23);

transmission power control bit generators (item 14-1, 14-N, figure 10) coupled to said signal-to-noise ratio determining circuits, respectively, for generating said transmission power control bit signals based on said signal-to-noise ratios (page 10:24-27);

a communication state monitor circuit (item 101, figure 10) coupled to said receivers for detecting quality deterioration of a communication state of radio communication between said base station and said mobile stations (page 17:1-17); and

a transmission power bit adjusting circuit (item 42, figure 10) coupled to said communication state monitor circuit and said transmission power control bit generators for controlling said transmission power control bit signals so as to suppress an increase of transmission power of said mobile stations when said communication state monitor circuit detects said quality deterioration (page 14:7-12, page 15:10-17).

14. A transmission power control system (figure 10) for use in a base station (item 10, figure 10) of a mobile communication system, said base station including receivers (item 11-1, 11-N, figure 10) for demodulating transmission signals (page 10:9-12) transmitted from said mobile stations to produce demodulated signals, signal-to-noise ratio determining circuits (item 13-1, 13-N, figure 10) coupled to said receivers, respectively, for determining signal-to-noise ratios of said demodulated signals (page 10:20-23) and transmission power control bit generators (item 14-1, 14-N, figure 10) connected to said signal-to-noise ratio determining circuits

respectively for generating said transmission power control bit signals based on said signal-to-noise rations (page 10:24-27), said transmission power control system comprising:

a communication state monitor circuit (item 101, figure 10) coupled to said receivers for detecting quality deterioration of a communication state of radio communication between said base station and said mobile stations (page 17:1-17); and

a transmission power bit adjusting circuit (item 42, figure 10) coupled to said communication state monitor circuit and said transmission power control bit generators for controlling said transmission power control bit signals so as to suppress an increase of transmission power of said mobile stations when said communication state monitor circuit detects said quality deterioration (page 14:7-12, page 15:10-17).

22. A method of controlling transmission power of mobile stations (item 20-1, 20-n, 20-N, figure 4) from a base station (item 10, figure 4) of a mobile communication system (figure 4), comprising:

monitoring, at said base station, a communication state of radio communication between said base station and said mobile stations (page 4:21-23, page 14:13-17);

judging, at said base station, whether said monitored communication state is worse than a predetermined state (page 4:23-25, page 13:21-25); and

notifying, in said base station, an external circuit of said quality deterioration when said communication state is judged to be worse than said predetermined state (page 4:25 to page 5:1, page 14:2-6).

27. A method of controlling transmission power of mobile stations (item 20-1, 20-n, 20-N, figure 4) of a mobile communication system (figure 4) by use of transmission power

control bit signals (page 10:24-27) transmitted from a base station (item 10, figure 4), comprising:

demodulating transmission signals transmitted from said mobile stations to produce demodulated signals (page 10:9-12);

determining signal-to-noise ratios of said demodulated signals (page 10:20-23);

generating said transmission power control bit signals on the basis of said signal-to-noise rations (page 10:24-27);

detecting, at said base station, quality deterioration of a communication state of radio communication between said base station and said mobile stations (page 17:1-17); and

controlling, at said base station, said transmission power control bit signals so as to suppress an increase of transmission power of said mobile stations when said quality deterioration is detected (page 14:7-12, page 15:10-17).

35. A base station (item 10, figure 10) in a mobile communication system (figure 10) comprising:

a receiver (item 11-1, 11-N, figure 10) which demodulates transmission signals transmitted from plural mobile stations (page 10:9-12);

a communication state monitor (item 101, figure 10), coupled to said receiver, which detects a deterioration of a communication state of radio communication between said base station and the plural mobile stations (page 17:1-17);

a transmission power control signal adjusting circuit (item 42, figure 10), coupled to said communication state monitor, which controls transmission power control signals so as to

decrease the transmission power of the plural mobile stations if said communication sate monitor detects the deterioration (page 14:7-12, page 15:10-17); and

a transmitter (item 16, figure 10), coupled to said transmission power control signal adjusting circuit, which transmits the transmission power control signals to the plural mobile stations .

37. A mobile station among plural mobile stations (item 20-1, 20-n, 20-N, figure 4), in a mobile communication system (figure 4), comprising:

a transmitter (item 16, figure 4) which transmits a signal to a base station (item 10, figure 4);

a receiver (item 21-1, 21-n, figure 4) which receives, from the base station, a transmission power control signal directing to decrease a power of the signal to be transmitted to the base station in the case where a deterioration of a communication sate of radio communication between the base station and the plural mobile stations is detected at the base station (page 11:2-21); and

a transmission power controller (item 24-1, 24-n, figure 4) which decides a transmission power of the signal to be transmitted to the base station based on the transmission power control signal (page 12:11-15).

39. A mobile communication system (figure 10) comprising a base station (item 10, figure 10) and plural mobile stations (item 20-1, 20-n, 20-N, figure 10), wherein said base station comprises:

a receiver (item 11-1, 11-N, figure 10) which demodulates transmission signals transmitted from said plural mobile stations (page 10:9-12);

a communication state monitor (item 101, figure 10), coupled to said receiver, which detects a deterioration of a communication state of radio communication between said base station and said plural mobile stations (page 17:1-17);

a transmission power control signal adjusting circuit (item 42, figure 10), coupled to said communication state monitor, which controls transmission power control signals so as to decrease the transmission power of said plural mobile stations if said communication sate monitor detects the deterioration (page 14:7-12, page 15:10-17); and

a transmitter (item 16, figure 10), coupled to said transmission power control signal adjusting circuit, which transmits the transmission power control signals to the plural mobile stations, and

each of said mobile stations comprises:

a transmitter (item 25-1, 25-n, figure 10) which transmits a signal to said base station;

a receiver (item 21-1, 21-n, figure 10) which receives one of the transmission power control signals from the base station; and

a transmission power controller (item 24-1, 24-n, figure 10) which decides a transmission power of the signal to be transmitted to said base station based on the transmission power control signal received by said receiver.

40. A method, for a mobile communication system (figure 10) comprising a base station (item 10, figure 10) and plural mobile stations (item 20-1, 20-n, 20-N, figure 10), comprising:

demodulating transmission signals transmitted from the plural mobile stations (page 10:9-12);

detecting, at the base station, a deterioration of a communication state of radio communication between said base station and the plural mobile stations (page 17:1-17);

controlling, at the base station, power control signals so as to decrease the transmission power of the plural mobile stations if said communication sate monitor detects the deterioration (page 14:7-12, page 15:10-17); and

transmitting the transmission power control signals to the plural mobile stations (item 16, figure 10).

41. A method, for a mobile communication system (figure 4) comprising a base station (item 10, figure 4) and plural mobile stations (item 20-1, 20-n, 20-N, figure 4), comprising:

transmitting a signal to the base station (item 25-1, 25-n, figure 10);

receiving, from the base station, a transmission power control signal directing to decrease a power of the signal to be transmitted to the base station in the case where a deterioration of a communication sate of radio communication between the base station and the plural mobile stations is detected at the base station (item 21-1, 21-n, figure 10); and

deciding a transmission power of the signal to be transmitted to the base station based on the transmission power control signal (item 24-1, 24-n, figure 10).

42. A method for a mobile communication system (figure 10), comprising a base station (item 10, figure 10) and plural mobile stations (item 20-1, 20-n, 20-N, figure 10), comprising:

demodulating transmission signals transmitted from the plural mobile stations (page 10:9-12);

detecting, at the base station, a deterioration of a communication state of radio communication between said base station and the plural mobile stations (page 17:1-17);

controlling, at the base station, transmission power control signals so as to decrease the transmission power of the plural mobile stations if said communication sate monitor detects the deterioration (page 14:7-12, page 15:10-17);

transmitting the transmission power control signals to the plural mobile stations (item 16, figure 10);

transmitting a signal to the base station (item 25-1, 25-n, figure 10);

receiving one of the transmission power control signals form the base station (item 21-1, 21-n, figure 10); and

deciding a transmission power of the signal to be transmitted to the base station based on the transmission power control signal received (item 24-1, 24-n, figure 10).

In the digital mobile communication system, the reverse-link (or up-link) transmission power is generally controlled to save battery consumption of mobile stations with keeping a

desired receiving quality at a base station which communicate with the mobile stations and to control interference between transmission signals transmitted from the mobile stations. Especially, such transmission power control is indispensable for the code division multiple access (CDMA) system because the mobile stations simultaneously uses a common frequency band in the CDMA system. The common frequency band is also used in other cells adjoining the cell covered by the base station in the CDMA system. Specification, page 1, lines 10-20.

When the number of the mobile stations, which communicate with the base station, increases, and interference between the reverse-link transmission signals of the mobile stations becomes large, the conventional transmission power control system makes the mobile stations increase the transmission power. Similarly, when interference from adjoining cells increases, the base station also makes the mobile stations increase the transmission power. In these cases, the increase of the transmission power of the mobile stations often makes the SNRs of the demodulated signals at the base station worse. The transmission power control system can not decide whether the increase of the transmission power of the mobile station improves the SNRs of the demodulated signals or not. In addition, the mobile stations waste batteries because they transmit the reverse-link transmission signals with the maximum power in these cases. Furthermore, it makes the interference for adjoining cells large and makes connection capacity of the mobile communication system small that the mobile stations transmit the reverse-link transmission signals with the maximum power. Specification, page 12, line 19 to page 13, line 7.

The transmission power control system of Appellant's invention is applied to a mobile communication system adopting CDMA system. The mobile communication system comprises base stations and mobile stations. The base station 10 comprises receivers 11-1 to 11-N. Decoders 12-1 to 12-N are connected to the receivers 11-1 to 11-N, respectively. Signal-to-noise

(SNR) determining circuits 13-1 to 13-N are also connected to the receivers 11-1 to 11-N, respectively. Transmission power control (TPC) bit generators 14-1 to 14-N are connected to the SNR determining circuits 13-1 to 13-N. A communication state monitor 41 is connected to the SNR determining circuits 13-1 to 13-N, while a TPC bit adjusting circuit 42 is connected to the communication state monitor 41, the TPC bit generators 14-1 to 14-N and multiplexers 15-1 to 15-N. A transmitter 16 is connected to all of the multiplexers 15-1 to 15-N. Specification, page 9, lines 5-19; -page 13, lines 15-18.

The base station can simultaneously communicate with the mobile stations located in a cell covered by the base station. For purposes of the claimed invention, it is assumed that the mobile stations simultaneously communication with the base station. A representative mobile station is shown as item 20-n. The mobile station 20-n comprises a receiver 21-n. A decoder 22-n connected to the receiver 21-n. A transmission power control (TPC) bit decoder 23-n is also connected to the receiver 21-n. A transmission power deciding circuit 24-n is connected to the bit decoder 23-n. A transmitter 25-n is connected to the transmission power deciding circuit 24-n. A combination of the TPC bit decoder 23-n and the transmission power deciding circuit 24-n serves as another part of the conventional transmission power control system. Specification, page 9, line 20 to page 10, line 6.

The mobile station 20-n receives the forward-link transmission signal. In the mobile station 20-n, the receiver 21-n demodulates the forward-link transmission signal and extracts the multiplexed signal produced by the multiplexer 15-n (Step S301). The mobile station 20-n supplies the extracted multiplexed signal to both of the decoder 22-n and the TPC decoder 23-n. Specification, page 11, lines 20-25.

The decoder 22-n extracts the encoded forward-link information signal from the extracted multiplexed signal and decodes the encoded forward-link information signal into a decoded forward-link information signal (Step S 302). Error detection and correction is made for the decoded forward-link information signal. Because the decoded forward-link information is not important for this invention, no description will be made about processing for the decoded forward-link information signal. Specification, page 11, line 26 to page 12, line 5.

On the other hand, the TPC bit decoder 23-n extracts the TPC bit signal from the extracted multiplexed signal and decodes the extracted TPC bit signal into a decoded TPC bit signal (Step S303). The TPC bit decoder 23-n supplies the decoded TPC bit signal to the transmission power deciding circuit 24. The transmission power deciding circuit 24 decides the transmission power of the transmitter 25 in response to the decoded TPC bit signal (Step S304). However, the transmission power deciding circuit 24 restricts the transmission power under a predetermined maximum power. The transmitter 25 transmits the reverse-link transmission signal with the decided transmission power decided by the transmission power deciding circuit 24 thereafter (Step S305). Specification, page 12, lines 6-18.

For the base station 10, the transmission power control system operates according a flowchart illustrated in Fig. 5. At a step S501 of Fig. 5, the communication state monitor 41 receives the SNR signals supplied from the SNR bit determining circuits 13-1 to 13-N and decides whether a communication state between the base station 10 and the mobile stations 20-1 to 20-N keeps worse than a predetermined state for a predetermined time. When the communication state keeps worse than the predetermined state for the predetermined time, it can be considered that many of the detected SNRs are lower than the desired SNR because of the interference and the detected SNRs can not be improved by increase of the transmission power

of the mobile stations. The communication state monitor 41 notifies the TPC bit adjusting circuit 42 of quality deterioration of the communication between the base station 10 and the mobile stations 20-1 to 20-N when the communication state keeps worse than the predetermined state for the predetermined time. Specification, page 13, line 19 to page 14, line 6.

Successively, the TPC bit adjusting circuit 42 adjusts the TPC bit signals supplied from the TPC generators 14-1 to 14-N according to the notification of the quality deterioration supplied from the communication state monitor 41 (Step S502). The TPC bit adjusting circuit 42 supplies the adjusted TPC bit signals instead of the TPC bit signal generated by the TPC generators 14-1 to 14-N to the multiplexers 15-1 to 15-N. Specification, page 14, lines 7-12.

Fig. 6 describes the operation of the communication state monitor 41 in more detail. The communication state monitor 41 monitors a communication state of a radio communication between the base station 10 and the mobile stations 20-1 to 20-N as follows. At first, the communication state monitor 41 finds averages of the determined SNRs per a predetermined time individually on the basis of the SNR signals supplied from the SNR determining circuits 13-1 to 13-N (Step S601). Specification, page 14, lines 13-21.

Next, the communication state monitor 41 compares each of the averages with a predetermined threshold which is considerably lower than the desired SNR. Then, the communication state monitor 41 counts the number of the averages each of which is lower than the predetermined threshold. Furthermore, the communication sate monitor 41 compares the counted number with a predetermined number (Step S602). Specification, page 14, lines 22-28.

When the counted number is equal to or lager than the predetermined number, the communication state monitor 41 judges that the communication state is worse than the predetermined state and notifies the TPC bit adjusting circuit 42 of the quality deterioration (Step

S603). On the other hand, the communication state monitor 41 does nothing when the counted number is smaller than the predetermined number. Specification, page 15, lines 1-7.

Thereafter, the communication state monitor 41 repeats the operation as shown in Fig. 6 at regular time intervals. As illustrated in Fig. 7, when the TPC bit adjusting circuit 42 receives the notification of the quality deterioration from the communication state monitor (Step S701), it changes the first TPC bit signals of the TPC bit signals supplied from the TPC bit generator 14-1 to 14-N into the second TPC bit signals predetermined times (Step S702). In this event, the second TPC bit signals require the mobile stations to reduce the transmission power by the fixed value regardless of the difference between the measured SNRs and the desired SNR. Specification, page 15, lines 8-17.

Because the second TPC bit signals require the corresponding mobile stations to reduce the transmission power, the interference is suppressed. As a result, it can be avoided that the mobile stations waste batteries and that a connection capacity of the mobile communication system becomes small. Especially, in each of the adjoining cells, because the interference from the cell covered by the base station 10 is reduced, the number of the mobile stations communicating with the base station thereof becomes large. Specification, page 15, lines 18-25.

VII. ARGUMENT

A. The Rejections based on Kang et al. in view of Okamato et al.

1. The Rejections of Claims 1-5 and 22-26 based on Kang et al. in view of Okamato et al.

Appellant respectfully requests the members of the Board to reverse the aforementioned rejection of claims 1-5 and 22-26 under 35 U.S.C. §103(a) as being unpatentable over Kang et al. in view of Okamato et al. Appellant disagrees with the Examiner's rejections because the cited references fail to disclose or suggest at least the following claim limitations of the independent claims:

1. a communication monitor circuit for ***detecting quality deterioration of radio communication with mobile stations***

22. monitoring, at said base station, ***a communication state of radio communication between said base station and said mobile stations***

Kang et al. relates to a method and apparatus of forward link (i.e., a wireless link from a base station to a mobile station) power control in a code division multiple access (CDMA) wireless local loop system. Col. 1, lines 11-14. The Examiner alleges that Kang et al. discloses all of the claim limitations except for the "communication state" of radio communications. In particular, the Examiner alleges that item 224 (the portion of determining and controlling base station transmission power) shown in figure 2 is the claimed communication monitor circuit. However, as mentioned above, Kang et al. is concerned with the control of power to one mobile station, rather than the claimed plurality of mobile stations. Appellant note that col. 7 lines 42-43 states: "Also, the mobile station 210 may be comprised of the plurality of mobile stations." However, if there was a plurality of mobile stations, there would also be a plurality of items 221-226 in the base station. Essentially, for each mobile station, there would be a corresponding set

of items 221-226. Thus, even if item 224 did correspond to the claimed communication monitor circuit, one item 224 would not communicate with a plurality of mobile stations.

Regarding Okamato et al., the Examiner cites it for disclosing the monitoring of the communication state of a plurality of mobile stations. However, this reference adds nothing that is not already disclosed in the background section of the specification. There is nothing in the Okamato et al. that would suggest to one skilled in the art how to modify the apparatus in Kang et al. to arrive at the claimed invention.

For at least these reasons, Appellant requests that the members of the Board to reverse the aforementioned rejections of claims 1 and 22 and their dependent claims 2-5 and 23-26.

2. The Rejections of Claim 6-21 and 27-42 based on Kang et al. in view of Okamato et al.

Appellant respectfully requests the members of the Board to reverse the aforementioned rejection of claims 6-21 and 27-42 under 35 U.S.C. §103(a) as being unpatentable over Kang et al. in view of Okamato et al. Appellant disagrees with the Examiner's rejections because the cited references fail to disclose or suggest at least the following claim limitations of the independent claims:

> 6. a communication state monitor circuit coupled to said receivers for ***detecting quality deterioration of a communication state of radio communication between said base station and said mobile stations***
>
> 14. a communication state monitor circuit coupled to said receivers for ***detecting quality deterioration of a communication state of radio communication between said base station and said mobile stations***
>
> 27. detecting, at said base station, ***quality deterioration of a communication state of radio communication between said base station and said mobile stations***
>
> 35. a receiver which demodulates transmission signals transmitted from ***plural mobile stations***;

a communication state monitor, coupled to said receiver, ***which detects a deterioration of a communication state of radio communication between said base station and the plural mobile stations***;

37. a receiver which receives, from the base station, a transmission power control signal directing to decrease a power of the signal to be transmitted to the base station in the case where ***a deterioration of a communication sate of radio communication between the base station and the plural mobile stations is detected at the base station;***

39. a communication state monitor, coupled to said receiver, which ***detects a deterioration of a communication state of radio communication between said base station and said plural mobile stations***;

40. detecting, at the base station, ***a deterioration of a communication state of radio communication between said base station and the plural mobile stations***

41. receiving, from the base station, a transmission power control signal directing to decrease a power of the signal to be transmitted to the base station in the case ***where a deterioration of a communication sate of radio communication between the base station and the plural mobile stations is detected at the base station***

42. detecting, at the base station, ***a deterioration of a communication state of radio communication between said base station and the plural mobile stations***

As mentioned above, Kang et al. relates to a method and apparatus of forward link (i.e., a wireless link from a base station to a mobile station) power control in a code division multiple access (CDMA) wireless local loop system. Col. 1, lines 11-14. The Examiner alleges that Kang et al. discloses all of the claim limitations except for the "communication state" of radio communications. In particular, the Examiner alleges that item 224 (the portion of determining and controlling base station transmission power) shown in figure 2 is the claimed communication monitor circuit. However, as mentioned above, Kang et al. is concerned with the control of power to one mobile station, rather than the claimed plurality of mobile stations. Appellant note that col. 7 lines 42-43 states: "Also, the mobile station 210 may be comprised of the plurality of mobile stations." However, if there was a plurality of mobile stations, there would also be a

plurality of items 221-226 in the base station. Essentially, for each mobile station, there would be a corresponding set of items 221-226. Thus, even if item 224 did correspond to the claimed communication monitor circuit, one item 224 would not communicate with a plurality of mobile stations.

Regarding Okamato et al., the Examiner cites it for disclosing the monitoring of the communication state of a plurality of mobile stations. However, this reference adds nothing that is not already disclosed in the background section of the specification. There is nothing in the Okamato et al. that would suggest to one skilled in the art how to modify the apparatus in Kang et al. to arrive at the claimed invention.

For at least these reasons, Appellant requests that the members of the Board to reverse the aforementioned rejections of claims 6, 14, 27, 35, 37 and 39-42 and their dependent claims.

In addition to being allowable for the above reasons claims 6-21 and 27-42 are allowable for the following reason. As mentioned above, the claimed invention is related to control of the reverse-link channel (mobile to base power), as shown in the claim limitations below, whereas Kang et al. is concerned with the control of the forward traffic channel (base to mobile power). See the Title of Kang et al. and the Field of the Invention. Therefore, Kang et al. does not disclose the limitations of claims 6-21 and 27-42 for at least this additional reason.

> 6. a transmission power bit adjusting circuit coupled to said communication state monitor circuit and said transmission power control bit generators for controlling said transmission power control bit signals ***so as to suppress an increase of transmission power of said mobile stations*** when said communication state monitor circuit detects said quality deterioration.
>
> 14. a transmission power bit adjusting circuit coupled to said communication state monitor circuit and said transmission power control bit generators for controlling said transmission power control bit signals ***so as to suppress an increase of transmission***

power of said mobile stations when said communication state monitor circuit detects said quality deterioration.

27. controlling, at said base station, said transmission power control bit signals ***so as to suppress an increase of transmission power of said mobile stations*** when said quality deterioration is detected.

35. a transmission power control signal adjusting circuit, coupled to said communication state monitor, which controls transmission power control signals ***so as to decrease the transmission power of the plural mobile stations*** if said communication sate monitor detects the deterioration; and

39. a transmission power control signal adjusting circuit, coupled to said communication state monitor, which controls transmission power control signals ***so as to decrease the transmission power of said plural mobile stations*** if said communication sate monitor detects the deterioration; and

40. controlling, at the base station, power control signals ***so as to decrease the transmission power of the plural mobile stations*** if said communication sate monitor detects the deterioration; and

41. receiving, from the base station, ***a transmission power control signal directing to decrease a power of the signal to be transmitted to the base station*** in the case where a deterioration of a communication sate of radio communication between the base station and the plural mobile stations is detected at the base station; and

42. controlling, at the base station, transmission power control signals ***so as to decrease the transmission power of the plural mobile stations*** if said communication sate monitor detects the deterioration;

In the Advisory Action, the Examiner argues that Kang et al. col. 7, line 65 to col. 8, line 2, discloses "the power transmission control from mobile to the base station." The cited portion of Kang et al. is shown below.

> At this time, the mobile station may transmit the receiving bit-energy/noise ratio to the base station 220 through an additional channel.
>
> The data transmitted from the mobile station is input to the base station receiver 221 of the base station 220.

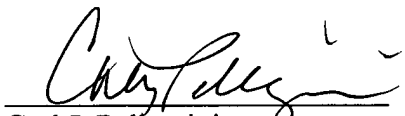
Appellants respectfully submits that this portion of Kang et al. does not disclose or suggest control of the reverse channel link; rather, it confirms that Kang et al. is concerned with the control of the forward traffic channel (base to mobile power). Therefore, for this additional

reasons, Appellant requests that the members of the Board to reverse the aforementioned rejections of claims 6-21 and 27-42.

Unless a check is submitted herewith for the fee required under 37 C.F.R. §41.37(a) and 1.17(c), please charge said fee to Deposit Account No. 19-4880.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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